GOVERNMENT OF INDIA
NEW AND RENEWABLE ENERGY
LOK SABHA

UNSTARRED QUESTION NO:1056
ANSWERED ON:05.08.2011
POWER GENERATION THROUGH RENEWABLE ENERGY SOURCES
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Will the Minister of NEW AND RENEWABLE ENERGY be pleased to state:

(a) the total potential of power generation form renewable energy sources in the country, source-wise and State- wise;

(b) the share of renewable energy to the total installed power generation capacity from all sources in the country, percentage- wise and source-wise:

(c) the details of economic viability of the projects based on renewable energy sources as compared to traditional sources, source−wise cost per megawatt; and

(d) the details of power production from renewable energy sources during the last three years and the current year State-wise and source-wise?

Answer

THE MINISTER OF NEW AND RENEWABLE ENERGY (DR. FAROOQ ABDULLAH)

(a): As per various studies undertaken in past, a potential of about 89,000 MW for power generation from different renewable energy sources has been estimated excluding solar energy potential which has been estimated for most parts of the country at around 20 MW per square kilometer of open, shadow free area covered with solar collectors. Source-wise and State-wise details thereof are given in Annexure-I.

(b): A total grid interactive renewable power generation capacity of around 20,556 MW has been set up as on 30.06.2011, which is about 11.5% of the total power generation installed capacity from all sources in the country. Source-wise share is as under:

Wind : 14551 MW (8.12%)

Small Hydro Power : 3105 MW (1.73%)

Bio-Power : 2860 MW (1.60%)

Solar Power : 40 MW (0.02%)

Total : 20,556 MW (11.5%)

(c): The initial capital investment per MW in renewable energy projects is generally high and their viability is very much region / site specific. As such, the cost of renewable power generation is also high in comparison with that from traditional sources. Indicative initial capital costs per megawatt for different categories of renewable power plants are given in Annexure-II.

(d): State-wise and source-wise details of renewable power generation installed capacity during the last three years and current year are given in Annexure-III.

Annexure-II

Annexure-II referred to in reply to part (c) Lok Sabha Unstarred Question No.1056 for 05.08.2011 regarding Power generation through

Renewable Energy Sources

Indicative initial capital costs of different categories of renewable power plants

Renewable power plant category	Capital cost (Rs. in crore/ MW)
Small Hydro Power	7.00- 8.50
Wind Power	5.50 - 6.00
Biomass Power	4.50 - 5.00
Bagasse Cogeneration	4.30 - 5.00
Energy from Urban/ Industrial Waste	4.00 - 12.00
Solar Power	12.00 - 17.00

MW = Megawatt

Annexure-III

Annexure-III referred to in reply to part (d) of Lok Sabha Unstarred Question No.1056 for 05.08.2011 regarding Power generation through Renewable Energy Sources.

Statewise and source-wise details of renewable power generation installed capacity during the last 3 years and 2011-12 (as on 30.06.2011)

(Capacity in MW)

S.No.	State/UT	Wind Power	SHP	Biomass	Waeste to power	Solar Energy. power
1	Andhra Pradesh	75.70	11.43	29.00	11.16	2.10
2	Arunanchal Pradesh	-	33.60	-	-	0.03
3	Assam	-	4.0	-	-	-
4	Bihar	-	9.40	9.50	-	-
5	Chhattisgarh	-	1.00	95.60	-	-
6	Goa	-	-	-	-	-
7	Gujarat	1006.53	8.60	-	11	
8	Haryana	-	7.40	28.00	-	-
9	Himachal Pradesh	-	252.36	1.80	-	-
10	Jammu & Kashmir	-	17.50	-	-	-
11	Jharkhand	-	-	-	-	-
12	Karnataka	716.25	319.35	102.90	-	-
13	Kerala	24.60	51.25	-	-	0.03
14	Madhya Pradesh	88.20	15.00	-	-	0.10
15	Maharashtra	589.90	63.80	353.00	4.70	4.00
16	Manipur	-	-	-	-	-
17	Meghalaya	-	-	-	-	-
18	Mizoram	-	19.00	-	-	-
19	Nagaland	-	-	-	-	-
20	Orissa	-	32.00	-	-	1.00
21	Punjab	-	30.60	28.00	-	2.33
22	Rajasthan	1081.40	-	94.50	-	7.65
23	Sikkim	-	13.00	-	-	-
24	Tamil Nadu	2210.80	6.85	197.70	1.40	6.05
25	Tripura	-	-	-	-	-
26	Uttar Pradesh	-	-	407.00	-	0.34
27	Uttarakhand	-	29.00	10.00	-	0.05
28	West Bengal	-	-	16.00	-	1.10
29	Andaman & Nicobar	-	-	0.10	-	-
30	Chandigarh	-	-	-	-	-
31	Dadar & Nagar Haveli	-	-	-	-	-
32	Daman & Diu	-	-	-	-	-
33	Delhi	-	-	-	-	2.14
34	Lakshwadeep	-	-	-	-	0.75
35	Pondicherry	-	-	-	-	0.03
36	Others	-	-	-	-	0.81
Total		5793.66	925.14	1373.00	17.26	46.63

SHP = Small hydro power
MW = Megawatt